Atty. Docket # AUS920010508US1
Hsu
Method and system for producing dynamically determined drop shadows
in a three-dimensional graphical user interface

ET551444850US

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FIG. 1A

(PRIOR ART)

FIG. 1B

(PRIOR ART)

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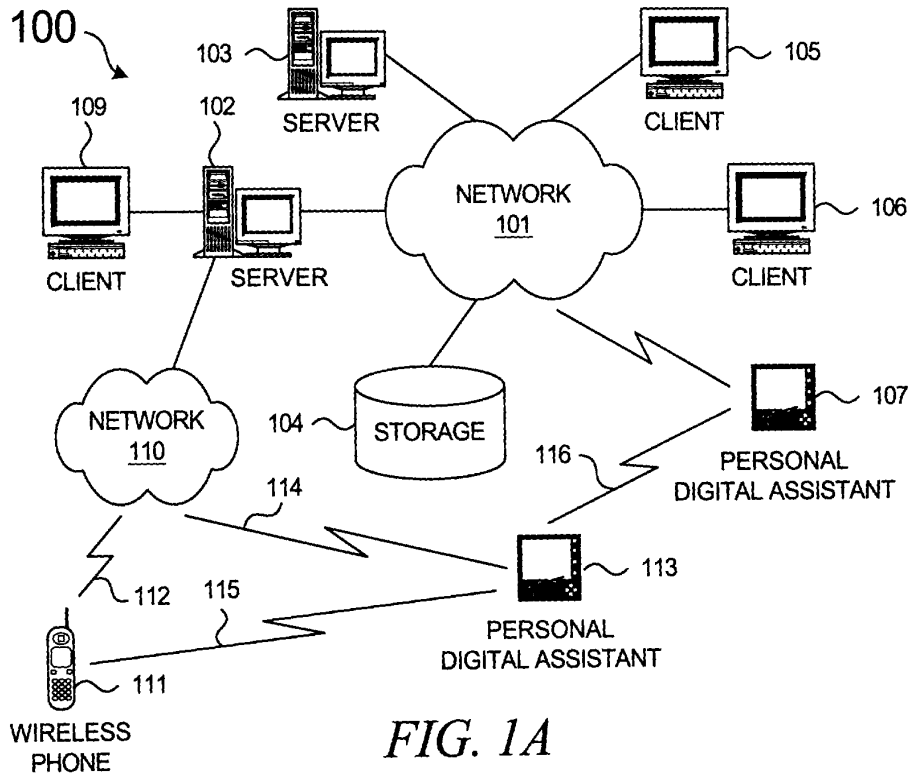in a three-dimensional graphical user interface

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218

211

221

222

219

212

201

223

213

Y-AXIS

215

224

202

210

217

203

X-AXIS

216

FIG. 2A

(PRIOR ART)

235

3 ———————————————— 231

2 ———————————————— 232

1 ———————————————— 233

0 ————————————————————————

234

FIG. 2B

(PRIOR ART)

241

242

Z-AXIS

Z-DEPTH
246

248

247

243

245

X-AXIS

FIG. 2C

(PRIOR ART)

244

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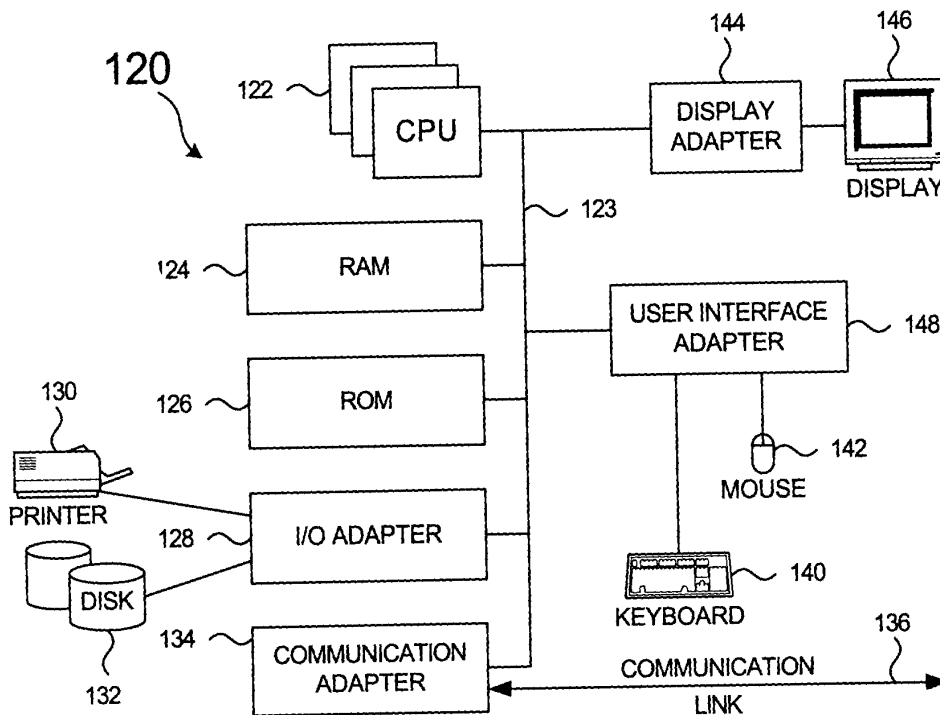in a three-dimensional graphical user interface

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FIG. 2D
(PRIOR ART)

FIG. 2E
(PRIOR ART)

FIG. 3A

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in a three-dimensional graphical user interface**

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```
                    ( BEGIN )
                        |
                        v
          +---------------------------+
          |   GENERATE SHADOW OBJECT  |
          |            402            |
          +---------------------------+
                        |
                        v
          +---------------------------+
          |    DISPLACE SHADOW OBJECT  |
          |  IN FIRST DIMENSION (X OR Y)|
          |            404            |
          +---------------------------+
                        |
                        v
          +---------------------------+
          |  GENERATE LIST OF OBJECTS FOR |
          | WHICH ILLUMINATION IS PARTIALLY|
          | OCCLUDED BY SHADOW OBJECT |
          |            406            |
          +---------------------------+
                        |
                        v
          +---------------------------+
          |   GET NEXT OBJECT IN LIST |
          |            408            |
          +---------------------------+
                        |
                        v
          +---------------------------+
          | COMPUTE DIFFERENCE IN Z-DEPTH |
          | BETWEEN CURRENT OBJECT AND |
          |      OCCLUDING OBJECT     |
          |            410            |
          +---------------------------+
                        |
                        v
          +---------------------------+
          |  CALCULATE TRANSLATION VALUE |
          | BASED ON  DIFFERENCE IN Z-DEPTH |
          |            412            |
          +---------------------------+
                        |
                        v
          +---------------------------+
          | TRANSLATE OVERLAPPING PORTION |
          | OF SHADOW OBJECT BY COMPUTED |
          |     TRANSLATION VALUE      |
          | ALONG SECOND DIMENSION (X OR Y) |
          |            414            |
          +---------------------------+
                        |
                        v
                   / MORE     \
          YES     / OBJECTS IN \
          <-------<    LIST?     >
                   \    416    /
                    \         /
                        | NO
                        v
                    ( END )
```
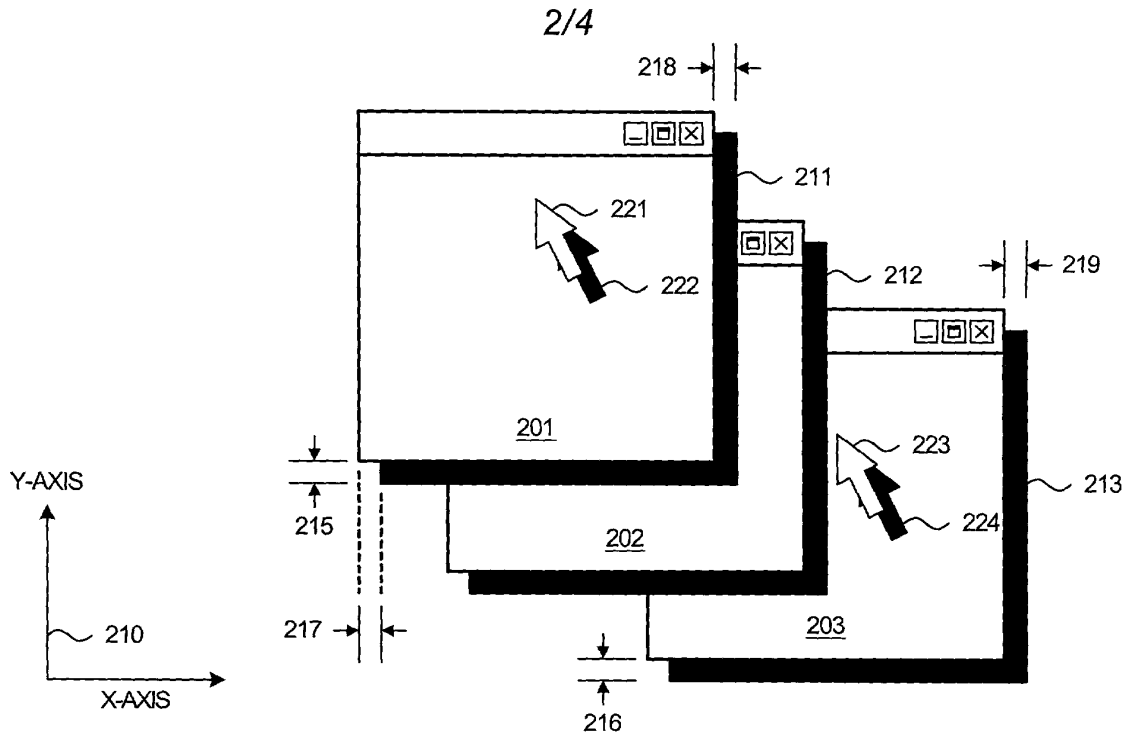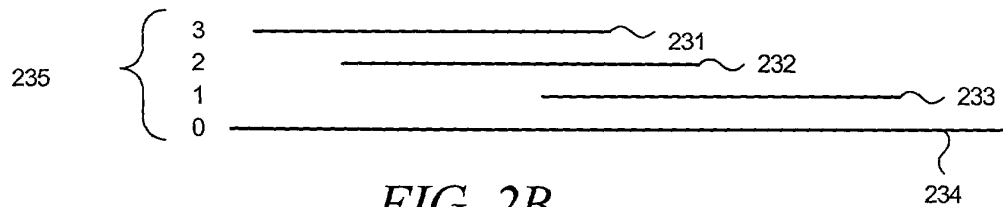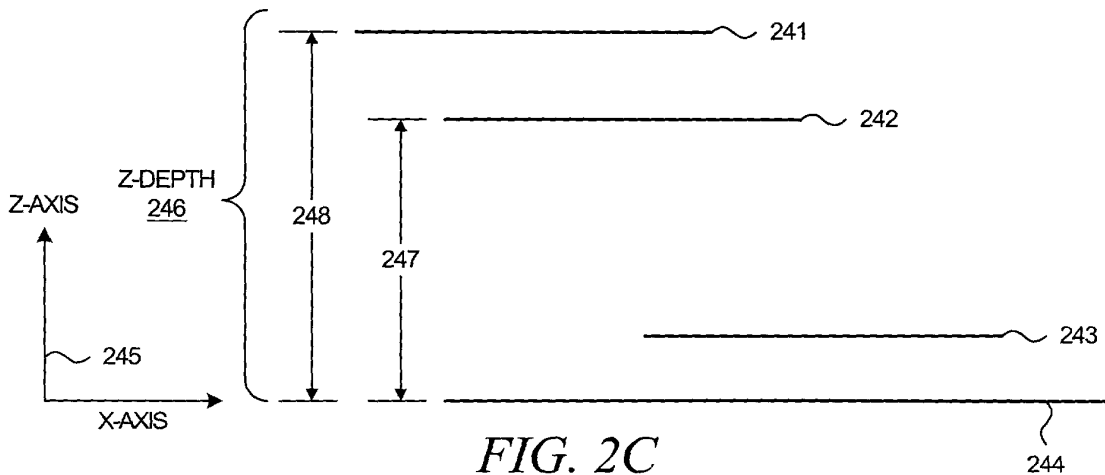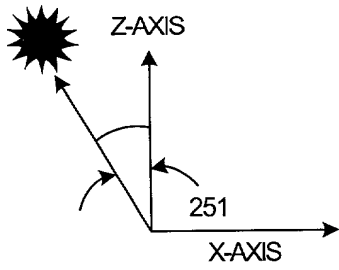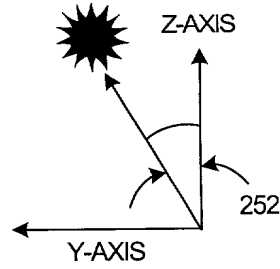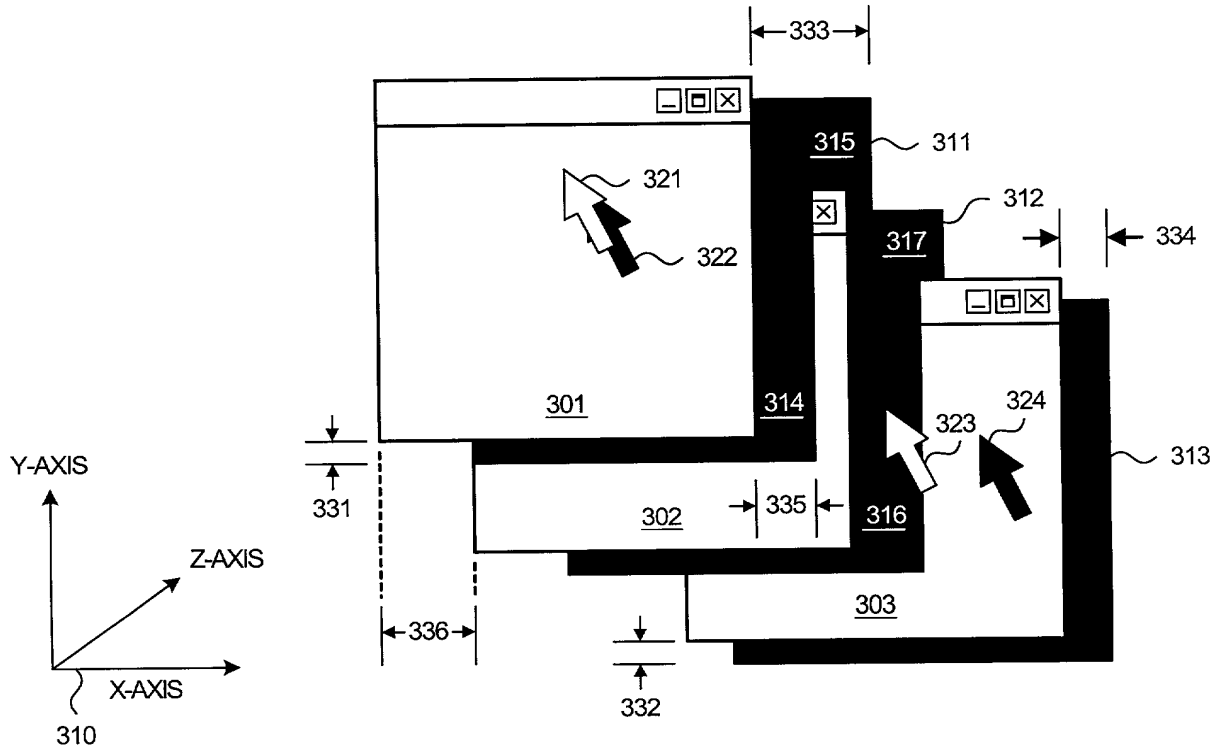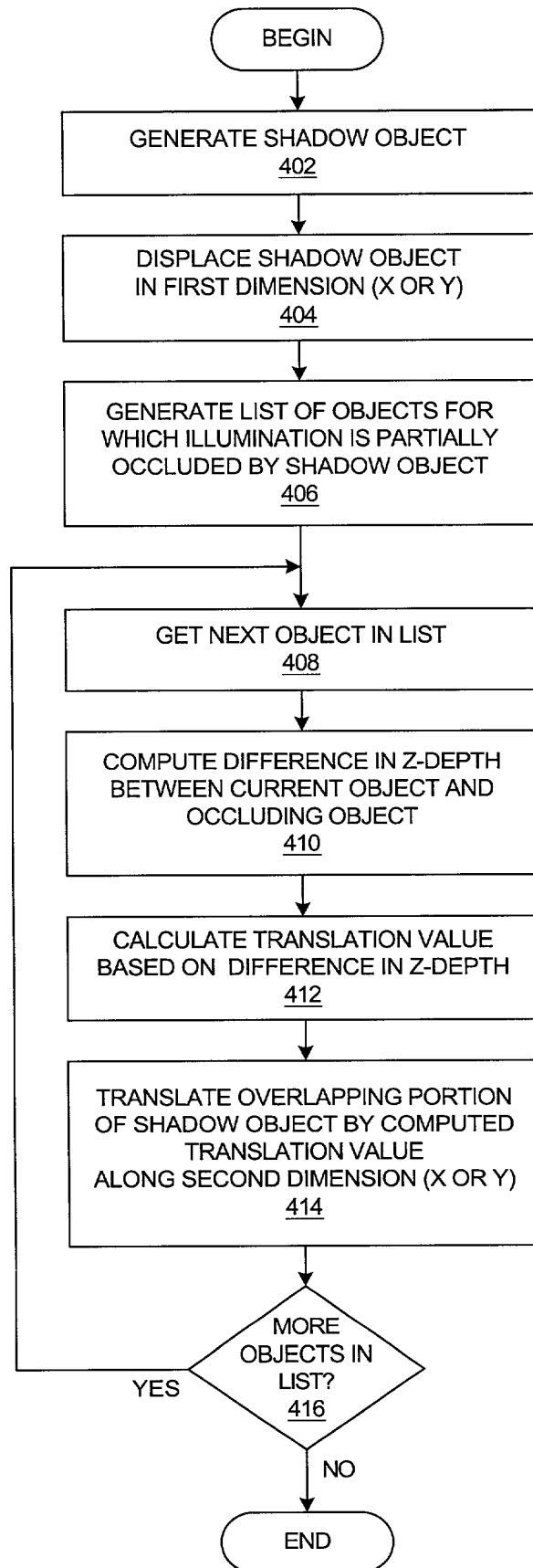
FIG. 3D